Reply to Office Action of June 18, 2004   Appl. No.: 09/824,844
Amendment Dated: September 14, 2004   Attorney Docket No.: CSCO-007/3484

<u>**Amendments to Specification**</u>

Please replace the paragraph beginning at page 2 line 12, with the following rewritten paragraph:

5   It <u>is</u> often helpful to know the specific intermediate devices present in a path taken by packets from a source system (e.g., computer system) to a destination system. For example, when troubleshooting a perceived problem of low data transfer throughput between the source and destination systems, a network administrator may wish to know the intermediate devices so that the problem can potentially be isolated to one of more of the intermediate devices. The path formed by the sequence of the intermediate devices

10   is often referred to as a route between the corresponding source and destination systems.

Please replace the paragraph beginning at page 8 line 1, with the following rewritten paragraph:

Figure 1 is a block diagram illustrating an example network environment 100 in which the present invention can be implemented. Network environment 100 is shown

15   containing layer-2 devices 110, 120, 130 and 150 forming a local area network (LAN) 190. Devices 110, 120, 130, and 150 provide connectivity to systems (101 and, 102, and 103), (121 and 122), (131) and (151) respectively. The operation of all components is described below in further detail.

Please replace the paragraph beginning at page 12 line 7, with the following rewritten paragraph:

20   Device 130 may determine that the port is directly connected to the destination system if no CDP related messages are not received on the port. However, other protocols and approaches may be used in determining whether the destination system is connected to the port of a device and the manner in which to communicate with the next

25   neighbor in the route to the destination system, as will be apparent to one skilled in the relevant arts based on the disclosure provided herein. Such other approaches and protocols are contemplated to be within the scope and spirit of several aspects of the

Page 2 of 23

Reply to Office Action of June 18, 2004   Appl. No.: 09/824,844
Amendment Dated: September 14, 2004   Attorney Docket No.: CSCO-007/3484

present invention.

Please replace the paragraph beginning at page 16 line 4, with the following
rewritten paragraph:

Examples of attributes are the IP address of the system being traced, the IP (or

5   MAC/Ethernet) address of the next device, the port to which the system is connected, the
etc. The attributes may be extended to provide other features (e.g., port speed, port MAC
address) which may be of interest to a network administrator.

The paragraph at page 17 line 17 through page 18 line 2 is sought to amended as
follows:

10   Please replace the paragraph beginning at page 16 line 17, with the following
rewritten paragraph:

Figure 4 is a block diagram illustrating the details of device 130 in one
embodiment. Device 130 is shown containing inbound interface 410, parser 420,
response processor 430, user interface 440, MAC (medium access control) lookup 450,

15   MAC table 455, next hop block 460, next hop table 465, generate request/response block
470, tables update block 480 and outbound interface 490. Each component is described
below in detail.

Please replace the paragraph beginning at page 17 line 10, with the following
rewritten paragraph:

20   Inbound interface 410 is shown receiving packets from three ports (shown as
logically as circles) corresponding to paths 123, 135 and 133 of Figure 1, and forwards
the packets to parser 420. Inbound interface 410 provides the electrical and other
protocol interfaces necessary to receive packets from various paths, and may be
implemented in a known way. Outbound interface 490 is also described similarly, except

25   that the packets received from generate request/response block 470 are transmitted in the
outbound direction on the same three ports.

Page 3 of 23

Reply to Office Action of June 18, 2004   Appl. No.: 09/824,844
Amendment Dated: September 14, 2004   Attorney Docket No.: CSCO-007/3484

Please replace the paragraph beginning at page 19 line 11, with the following rewritten paragraph:

MAC lookup block 450 may receive a trace command (from user interface 440) and determine an Ethernet Address corresponding to any systems in the command. The
5   Ethernet address(s) may be passed to next hop block 460. Next hop block 460 determines whether a system specified in a command is connected directly to a port on device 130. If the system is not connected to the port, next hop block 460 determines the address of ~~the~~ a neighbor (i.e., connected to a path provided through a port on device 130).

Please replace the paragraph beginning at page 20 line 3, with the following
10   rewritten paragraph:

Generate request/response block 470 generates a request packet after response processor 430 processes a response packet indicating that the route needs to be traced further. The request packet is directed to a device specified in the response packet. A request packet may also be generated when initiating a trace. Generate request/response
15   block 470 may generate a response packet when a request packet (generate by another device) is processed by next hop block 460.

Please replace the paragraph beginning at page 21 line 8, with the following rewritten paragraph:

RAM ~~530~~ 520 and storage 530 may together be referred to as a memory. RAM
20   530 (can contain multiple memory units) may receive instructions and data on path 550 from storage 530. ~~Secondary memory~~ Storage 530 may contain units such as hard drive 535 and removable storage drive 537. ~~Secondary storage~~ Storage 530 may store the software instructions and data, which enable device 130 to provide several features in accordance with the present invention.

Page 4 of 23